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ABSTRACT

"Intermedia" is a hypermedia system which was developed for use in university research and teaching. It provides a framework for object-oriented, direct manipulation editors and applications, and the capability to link together materials created with those applications. Instructors are able to construct exploratory environments for their students as well as use applications for their day-to-day work, research, and writing. This paper provides a discussion of hypermedia systems in general, as well as a description of the Intermedia system which focuses on several important user features, and illustrates the operation of the system through a sample session. The text is supplemented by 15 figures. (19 references) (Author/EW)

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INTERMEDIA: A System for Linking Multimedia Documents

Nicole Yankelovich

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Abstract

Intermedia is a hypermedia system developed for use in university research and teaching. It provides a framework for object-oriented, direct manipulation editors and applications, and the capability to link together materials created with those applications. Instructors are able to construct exploratory environments for their students as well as use applications for their day-to-day work, research and writing. This paper presents a general discussion of hypermedia followed by a description of the Intermedia system, focusing on several important user interface features and illustrating the operation of the system through a sample session.

1. Introduction

At Brown University, we have both formally and informally examined the way faculty, especially in the humanities, teach with currently available tools and technology. We observed that university instructors do not "tutor" students nearly as much as they try to guide them through bodies of material, help them to analyze and synthesize that material, and encourage them to make connections and discover meaningful relationships.

We have kept these methods in mind, therefore, while formulating the requirements for software systems appropriate for the scholarly community. We have focused our efforts on building tools for synthesizing, arranging, indexing, connecting, sharing, customizing, visualizing, integrating and retrieving information.

This paper describes *Intermedia*, one such tool designed for use in the university environment. The system, developed at Brown University's Institute for Research in Information and Scholarship (IRIS), contains multiple applications and provides mechanisms for linking together the contents of documents created with those applications. The bulk of this paper describes the linking, or *hypermedia*, functionality provided by Intermedia and the user interface techniques designed to support that functionality.

Hypertext and Hypermedia

In the early 1960's, Theodor Nelson coined the word *hypertext* to describe the idea of non-sequential writing. A hypertext system is one which allows authors or groups of authors to *link* information together, create *paths* through a corpus of related material, *annotate* existing texts, and create notes that point readers to either bibliographic data or the body of the referenced text. With a computer-based hypertext system, students and researchers are not obliged to search through library stacks to look up referenced books and articles; they can quickly follow trails of footnotes without losing their original context. Explicit connections — links — allow readers to travel from one document to another, automating what one does when following references in an encyclopedia. In addition, hypertext systems that support multiple users allow researchers, professors and students to communicate and collaborate with one another within the context of a body of scholarly material. For a survey of early hypertext systems refer to [Yank85].

Hypermedia is simply an extension of hypertext that incorporates other media in addition to text. With a hypermedia system, authors can create a linked corpus of material that includes text, static graphics, animated graphics, video, sound, music, and so forth. Examples and descriptions of existing hypermedia systems can be found in [Back82,

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Bend84, Fein82, Hala85 and Weye85].

2. The Intermedia System

Architecture

Intermedia is both an author's tool and a reader's tool. The system, in fact, makes no distinction between types of users providing they have appropriate access rights to the material they wish to edit, explore or annotate. Creating new materials, making links and following links are all integrated into a single modeless environment.

The Intermedia system is built on top of the 4.2 BSD UNIX operating system and runs on IBM RT/PC and Sun workstations which support Sun's Network File System (NFS). To create Intermedia, the software development team adopted an object-oriented preprocessor to the C programming language licensed to Brown University by Bolt, Beranek and Newman as well as Apple's *MacApp* facility for creating generic Macintosh applications [Tesl85] and Cadmus's *CadMac* toolbox, both under special agreement with Apple Computer, Inc. With an object-oriented development environment and a UNIX-based implementation of the Macintosh Toolbox, the Intermedia programmers constructed a system that starts with an application framework similar to the Apple *Lisa* [Appl83] or the XEROX *Star* [Xero82] environments and adds to that framework full hypermedia capabilities. For a more detailed description of the underlying Intermedia architecture, refer to [Meyr86].

The Applications

Five applications currently exist within the Intermedia framework: a text editor (*InterText*), a graphics editor (*InterDraw*), a scanned image viewer (*InterPix*), a three-dimensional object viewer (*InterSpect*), and a timeline editor (*InterVal*). Any number of documents of different types may be open on the desktop at one time along with the folders containing the documents. These applications conform as closely as possible to the Macintosh interface standards detailed in [Appl85]. Both programmer-level tools and well-defined user interface concepts contribute to the high degree of consistency exhibited across all Intermedia applications.

The InterText word processing application is similar to Apple's MacWrite [Appl84a] with the addition of *style sheets* for formatting text rather than MacWrite-style rulers. Using style sheets, the user can define a set of styles for a particular document (e.g., paragraph, title, subtitle, indented quote, numbered point) and apply those styles to any unit of text between two carriage returns, called an *entity*. When the user edits the definition of a style, all the entities to which that style is applied reformat accordingly.

With InterDraw, a structured graphics editor similar to Apple's MacDraw [Appl84b], users can created two-dimensional illustrations by selecting tools from a palette attached to each InterDraw window.

InterPix is a utility program that displays bitmap images entered into the system using a digitizing scanner. These images can be cropped, copied and pasted into InterDraw documents. The InterPix application is being extended to provide full bitmap editing capabilities.

Like InterPix, InterSpect is a viewer rather than an editor. It converts files containing three-dimensional data points into three-dimensional representations of that data. Users can manipulate the three-dimensional image by rotating it, zooming in or out, or hiding parts of the model.

The fifth application, InterVal, provides interactive editing features for creating chronological timelines. As the user enters pairs of dates and labels, the application formats them on a vertical timeline according to user-defined styles. Like a charting package, the display of the data is determined by a certain set of parameters which the user can modify.

The hypermedia functionality of the Intermedia system is integrated into each application so that the actions of creating and traversing links may be interspersed with the actions of creating and editing documents.

The act of making links between Intermedia documents has been modeled as closely as possible on the Smalltalk/Macintosh *copy/paste paradigm* [Appl85, Gold84] in an effort to fit the link-making process into a conceptual model already familiar to users. If links are to be made with frequency, they must be a seamless part of the user interface. The smooth integration of this new function into an already ingrained user interface model is apparent in the sample session following this section.

Unlike some other hypertext or hypermedia systems that only allow links to be made to entire documents [Know86 and Shne86], Intermedia allows users to create links from a specific location in one document to a specific location in another document. These "anchor points" in the documents are called *blocks*. In designing the Intermedia linking functionality, one of the development team's design goals was to allow anything that could be selected to be made into an anchor for a link. The size of a block, therefore, may range from an entire document to an insertion point, depending on the selection region a user identifies as the block's extent. For example, in an InterText document, a block might consist of an insertion point, a single character, a word, a sentence, two paragraphs, and so forth. Small marker icons are placed near the source and destination blocks to indicate the existence of a link.

To help manage a large corpus of linked documents, links and blocks are assigned a set of descriptive *properties*. Some of these, like user I.D. and creation time, are assigned automatically while other properties are user-defined. Users access and edit link and block property information through *property sheet dialogs*. These dialogs contain a field for the user to enter a one line *explainer*, similar to the subject field in some electronic mail programs. From a reader's perspective, link explainers are particularly important. If a single block has more than one link emanating from it, users choose the path they wish to follow from a list of link explainers presented in a dialog box.

Property sheets also contain fields for adding keywords. Although still under development, these keywords, along with the default information assigned to links and blocks, will provide users with a mechanism for searching the document corpus. The result of a keyword search will yield a list of explainers associated with all the blocks or links meeting the search criteria. Each item in the list will automatically be linked to its corresponding block, or, in the case of links, to the corresponding source block of each link. For example, a student would be able to search for all the links created by the professor after a certain date that contain the keywords "Browning and Dramatic Monologue."

Some users may want to enter both block and link properties during the link creation process, while others may not want to take the time to fill them in at all. By default, property sheets are *not* automatically presented to the user. Intermedia provides a *Viewing Specifications* dialog as a utility for setting user preferences. To change the default behavior, users alter settings in the Viewing Specificaitons dialog, turning link and/or block creation to "verbose." If users have created links with the "fast" rather than the "verbose" settings, they can still edit block and link properties after a link has been established by selecting a marker icon and choosing the "Link Properties" or "Block Properties" command from the menu.

Link and block properties help to manage complexity within the Intermedia environment, but the notion of *context* is even more crucial. In some systems, links are global; all links are available at all times to all users. In such systems, links become an integral part of the documents. In Intermedia,

block and link information is not stored within individual documents, but rather is superimposed on them. *Webs* are provided to maintain the block and link information, allowing users to work within their own context undistracted by documents, blocks and links created by others sharing the same computing resources. In the future, webs will also serve as the focus for filtering operations. Opening a web causes a particular set of blocks and links to be imposed on a set of documents while that web is opened. Thus, webs allow different users to impose their own links *on the same document set*. For example, an academic department might purchase all of Shakespeare's works in electronic format. Rather than duplicating every work each faculty member wants to link to, by introducing webs, Intermedia allows users to all create links to the same documents, without having to see each other's links. Although only one context may be viewed at a time, users can easily switch contexts by closing one web and opening another. Of course, if users do want work together, any number may share a single web.

In addition to webs, Intermedia also has a system of user access rights that help to manage multiple users sharing large bodies of connected material. Due to the hypermedia functionality of Intermedia, the access right scheme is slightly more complex than in other UNIX environments where users either have *read permission* or *write permission* to files and directories. Intermedia adds *annotation permission* to the other two forms of access rights. This allows students to add links to a document which they are not allowed to edit.

3. Common User Interface Concepts

Several user interface concepts stressed throughout Intermedia enable users to learn new applications quickly and predict the behavior of features they have never used before. Like the copy and paste operations in Macintosh and Smalltalk programs, some operations in the Intermedia system behave identically across all applications. The linking functionality is a prime example. In any document, users can specify a selection region and choose the "Start Link" command from the menu, and in any other document, regardless of type, users can define another selection region and choose one of several "complete link" commands. Likewise, to follow a link, a user exploring a web can select a marker icon in any type of document, and choose the "Follow" command from a menu. As a short cut, a user can "double-click" on a marker icon to initiate the follow, just as he or she might double-click on a icon in a folder to open a document. Since following a link usually entails opening a document, we anticipated that users would *expect* to be able to follow a link by double-clicking on the marker icon. In a system that encourages rapid transitions between applications, it is essential to limit the amount a browser must learn in order to be a successful user of the system and to capitalize on those conventions he or she may already be familiar with.

Other features in the system, while not exactly identical to one another, are conceptually similar. Most applications, for instance, allow users to control the format or the display characteristics of data. The interface techniques for conceptually similar operations have been designed to capitalize on the likenesses. One such example is the *style paradigm* [Inte86, Smit82]. Styles are sets of properties or characterists that govern the appearance of data within a document. Users can define or modify a style by filling out or editing a "form" called a *style sheet* (sometimes refered to as a *property sheet*). Both the InterText application and the InterVal application contain style sheets which can be used to specify different text formats such as paragraphs, indented quotes, lists, and titles, or different timeline formats such as position of dates relative to tick marks and position of labels relative to dates. In the graphics editor, different styles may be applied to shapes such as line width, pen style, or fill style. Although not yet implemented, InterDraw will also allow users to "borrow" the style of one shape and "apply" it to any others. This means that the combination of line width, pen style and fill style can be defined once and then applied

as a unit to any existing objects or to any new objects. The concept of styles will also be included in the InterSpect three-dimensional viewer in the future. In this case, users will be able to define a set of viewing parameters that specify a particular camera position. Just as styles in the text editor do not alter the content, but simply the presentation, of the text, styles in InterSpect will be used to define the manner in which the data is viewed. By storing all presentation parameters in style sheets, it is possible to substitute styles with the same name but different parameters for all types of data in the system.

Related to the use of styles, is the frequent use of *palettes* — sets of controls attached to a document window. Along with style sheet dialogs, palettes provide a means for defining and applying styles. In InterText, for example, all the styles defined for a particular document are stored in a style palette. Two mouse clicks are all that is necessary to either change the style of an existing text entity or to change from one style to another before beginning a new entity. With a large screen and the ability to have 30 or 40 windows open at one time, it is essential that all the tools needed for common operations are close at hand rather than in the menus. When they are not needed, however, all palettes can be hidden from view to unclutter the screen and to improve the manner in which material is presented to a person browsing through the system.

Another example of a standard user interface concept that permeates the system and is made possible in a workstation environment with virtual memory capabilities is the use of "infinite" *undo* and *redo* commands. Instead of only being able to retract the last action performed, the user is able to undo the effects of all actions performed since the last time a document was saved. Any single action or set of actions that the user has undone may then be redone. There are no actions in any Intermedia applications that modify the content of the document which cannot be undone. This fosters a sense of security in users, permitting them to experiment freely with their document with the knowledge that they can return it to its former state at any time.

To aid programmers in building standard features such as "undo" and "redo" consistently throughout all Intermedia applications, the software development team first extended Apple's object-oriented application framework, MacApp, and then implemented two general purpose, programmer-level *building blocks* within the extended framework. The building blocks, one for text and one for graphics, allow programmers to reuse text and graphics objects either "as is" or in slightly modified forms, cutting down on duplication of programming effort as well as enforcing consistent user interface techniques. With only MacApp and the building blocks, programmers would be able to implement applications that conform to the Macintosh user interface standards; however, the requirements for the Intermedia system include a uniform method of linking together the contents of documents created with any application within the system. To meet this requirment, the development team extended MacApp to include a set of features necessary for supporting linking functionality. In this way, applications not only *inherit* window, menu, mouse and other generic application functionality from MacApp, but also inherit linking functionality from the MacApp extensions, and text and graphic editing functionality from the building blocks.

4. Sample Session

To illustrate the user interface features and the linking functionality discussed above, this section of the paper takes the reader on a tour of the system designed to simulate the interaction that takes place during a hands-on Intermedia session. The figures should aid in visualizing the system, while the text should supply the action.

Figure 1

As you can see from Figure 1, the Intermedia desktop includes a window manager, a

graphical folder system, a menu bar, and a mouse interface. The contents of the folders reflect the underlying hierarchical UNIX directory structure. Unlike the Macintosh, Intermedia does not store application icons in the same folders with documents; instead, they are stored with several other special-purpose tools in an application, or *New*, window which you can see in the upper right corner of the screen. The reason for this is twofold. First, users do not have to search through folders to find the applications. Even if the New window is hidden from view by overlapping windows, selecting the "New" command from the File menu reveals it. Secondly, in a networked environment, it is easier to have a single set of applications in an agreed upon place that can be maintained and updated by a system adminstrator.

The contents of the active folder in Figure 1 represent a number of documents of different types (two InterPix, four InterVal, ten InterDraw, and seventeen InterText documents) that are samples from a larger corpus of material called *Context 32: A Web of English Literature* [Land86], created for the course "English 32: A Survey of English Literature from 1700 - Present." Any of these document icons can be selected, opened and edited. In order to follow or create links, however, we must first define a context by opening an existing web or by creating a new one. If a web is not open, we can still open and edit the documents; however, no link and block information will be visible. Rather than beginning a new web, we select the icon titled "Browning Web" and choose the "Open" command from the File menu.

Figure 2

A *global map*, or visual representation of the link structure, opens on the screen. Global maps are analogous to road maps of the entire country. They depict every document in a corpus; one line between two document icons indicates that at least one link exists between the documents. In a large corpus, users can only see a small portion of the map at any one time. The global map provides a broad overview; just as a traveler can see at a glance which cities are the biggest hubs by the number of roads emanating from them, an Intermedia user can see which documents are central to the corpus by observing the number of links connected to and from them.

An examination of the global map open in Figure 2 reveals that the InterDraw document "Browning's Literary Relations" contains the most number of connections and would therefore be the most appropriate starting point for our exploration. Once a user selects an entry point into the corpus, the equivalent of a detailed street map is necessary. *Local maps*, not shown in this scenario, serve this purpose by *tracking* the user's progress through the corpus and displaying only the currently active document and the links that emanate from it. When the user activates a different document, either by following a link or by opening one from a folder, the local map updates to display the new current document and its direct predecessor and successor links.

Figure 3

After double-clicking on the "Browning's Literary Relations" icon to open it, an InterDraw document containing a diagram with an image of Robert Browning opens. Notice that the three boxes in the top row of the diagram contain marker icons, arrows enclosed in boxes. These markers indicate the existence of links. To follow one of the links shown, we first select the marker above the text "Biography" by clicking once on it.

Figure 4

After selecting a marker icon, we pull down the Intermedia menu and select the "Follow" command.

Figure 5

We immediately learn from the appearance of a dialog box that the marker we selected has two links emanating from it, one which leads to a biography of Browning and the other which leads to a timeline. We select the

second link explainer in the dialog box and click on the "OK" button to confirm our selection.

Figure 6

The traversal of the link is now complete and the timeline document, which we see contains all the important events in Browning's life, appears. The author of Browning's timeline chose to leave the events clustered in 50 year intervals so that a majority of the events could be viewed in the window. This means that all the events between 1810 and 1859 are clustered under the tickmark by 1810, all the events between 1860 and 1919 are clustered under the tickmark by 1860, and so forth.

Notice that when a link is traversed, Intermedia automatically highlights the *extent* of the block at the other end of the link, indicating a particular scope of information to the reader. In this case our attention is drawn to the first event in the timeline.

We can now opt to recluster the timeline, but instead, we notice another marker icon above the second event on the timeline and decide to follow the link. We do so by double-clicking on the marker.

Figure 7

Another InterDraw document opens. Notice that no dialog box appeared this time. When we select a marker icon that only has one link emanating from it, the document at the other end of the link opens immediately since there are no other alternate paths to follow.

Like the portrait of Browning in Figure 2, the illustration in Figure 7 was entered into the system using a scanner. The bitmap was then displayed by the InterPix application, cropped and pasted into this InterDraw document. After looking at the picture, we decide to close it by clicking in the *close box* located in the window's upper left corner. Next we close the InterVal timeline.

Figures 8 and 9

Now we are back to the original Browning diagram. After our brief exploration, we decide to fill in the diagram by creating a new link. The first step in creating a link involves defining a block to serve as the anchor for the link. We select the text "Connection to Other Arts" as the source block of the link and choose "Start Link" from the Intermedia menu. While a link is pending, we may perform any number of other actions unrelated to link-making. Like the "Copy" operation common to all Macintosh-like applications, the "Start Link" operation is completely modeless.

Figure 10

Before completing the pending link, we return to the folder (not pictured) and open an InterText document called "Browning Arts." Once the text is displayed, we select the title of the document as the destination block of the link as shown in Figure 10. To complete the link we choose "Complete Relation" from the Intermedia menu. You will notice two different complete commands in the menu. These are similar in function, but each creates a different type of link. The "Complete Relation" command which we chose, indicates a primary path, whereas the "Complete Reference" command signifies that the information contained in the source block is of more importance than the information contained in the destination block.

Figure 11

After we issue the complete command, a link property dialog appears, allowing us to fill in descriptive information about the link. We replace the default text, "Link 35," with the more meaningful explainer shown in Figure 11. Before this particular session, we changed the default setting for link creation in the Viewing Specifications dialog so that a link property dialog would automatically be opened each time we create a link.

Figure 12

Once a link is established, both ends are indicated with markers. These markers are enclosed in boxes in some applications for better visibility, but the markers themselves are identical in all applications. Before making another link, we add a quotation to the "Browning Arts" document. After typing in the text of the quotation, we select the text, display the *style palette*, choose the "Indented Quote" style from the palette and click on the "Apply" button, also located in the palette. With a simple text selection followed by a palette selection and a button press, we have easily reformated the text without resorting to the more complex series of steps necessary in other word processing programs.

Figure 13

Now we decide to make another link to a new InterDraw document which will contain a painting in the same stylistic genre as Browning's poetry. The destination block of the previous link is appropriate for the source block of our new link, so we select the existing marker by clicking on it and then we choose "Start Link" from the menu (not pictured). Now, to create a new document, we activate the "New" window and double-click on the InterDraw icon.

Figure 14

After the new document opens, we draw a picture frame in which we will paste a scanned image at some later time. For the drawing, we use tools from both the tool and style palettes attached to the window. After the drawing is complete, we may hide one or both of the palettes. When a document is saved, the size of the window and the state of the palettes is preserved along with all editing changes.

Remember that a link is still pending. In the absence of an appropriate painting, we select the empty frame as the destination block of the pending link and choose "Complete Reference" from the Intermedia menu. This time, a new marker will only be added to the destination block, since the source block is already marked.

Figure 15

Before we end our session, we activate the global map window and choose "Save" from the File menu. This automatically saves the new links we have created as well as any new documents or editing changes made to existing documents.

4. Conclusion

To assess the power and utility of hypermedia, IRIS is conducting a series of experiments at Brown that introduce the Intermedia system into existing courses. As in the English literature course, students in a plant cell biology course are using Intermedia's editors, utilities, and linking functionality to write term papers and to explore a corpus of material about the cell and its processes. Prior to the beginning of the semester, the professor wrote, collected, organized and linked together primary source material for the corpus, including current research papers, digitized electronmicrographs, diagrams, lecture notes, and three-dimensional models of cells. In writing their papers, students use the same editing tools used by the professor and also include links to relevant primary source material in the corpus. The professor annotates student papers at various stages in the writing process, beginning with their outlines. These annotations consist of notes about the content of the paper and links to material that the professor feels the student should read, examine or explore before committing to a particular assertion or argument. Finally, after the papers are "submitted" for a grade, the students in the course are asked to read and comment on each others' papers. Like the professor's comments, the students' annotations include reactions and criticisms, or point to other student papers or to primary source material. Since the comments become part of the corpus, each student has the opportunity to read any or all of the comments left by others and comment on the comments, thus engaging in an

electronic dialogue. At the end of the course, the professor evaluates the quality of each student's research paper as well as the quality of his or her comments.

In the cell biology experiment, the Intermedia system is being used throughout the authoring process, providing facilities to create, organize, reorganize and cross-reference free-form text and graphics. The experiment also illustrates how a group of authors and editors can use a hypertext or hypermedia system to work collaboratively, using the tools to communicate as well as create.

In the Intermedia system, hypermedia functionality is incorporated into an integrated work environment with consistent, modeless, direct-manipulation applications. Strict adherence to pre-defined user interface paradigms throughout the system eases the difficulty of learning a set of different applications. The ability for users to apply what they have already learned from using one application is particularly important in an environment such as Intermedia that encourages frequent transitions from application to application.

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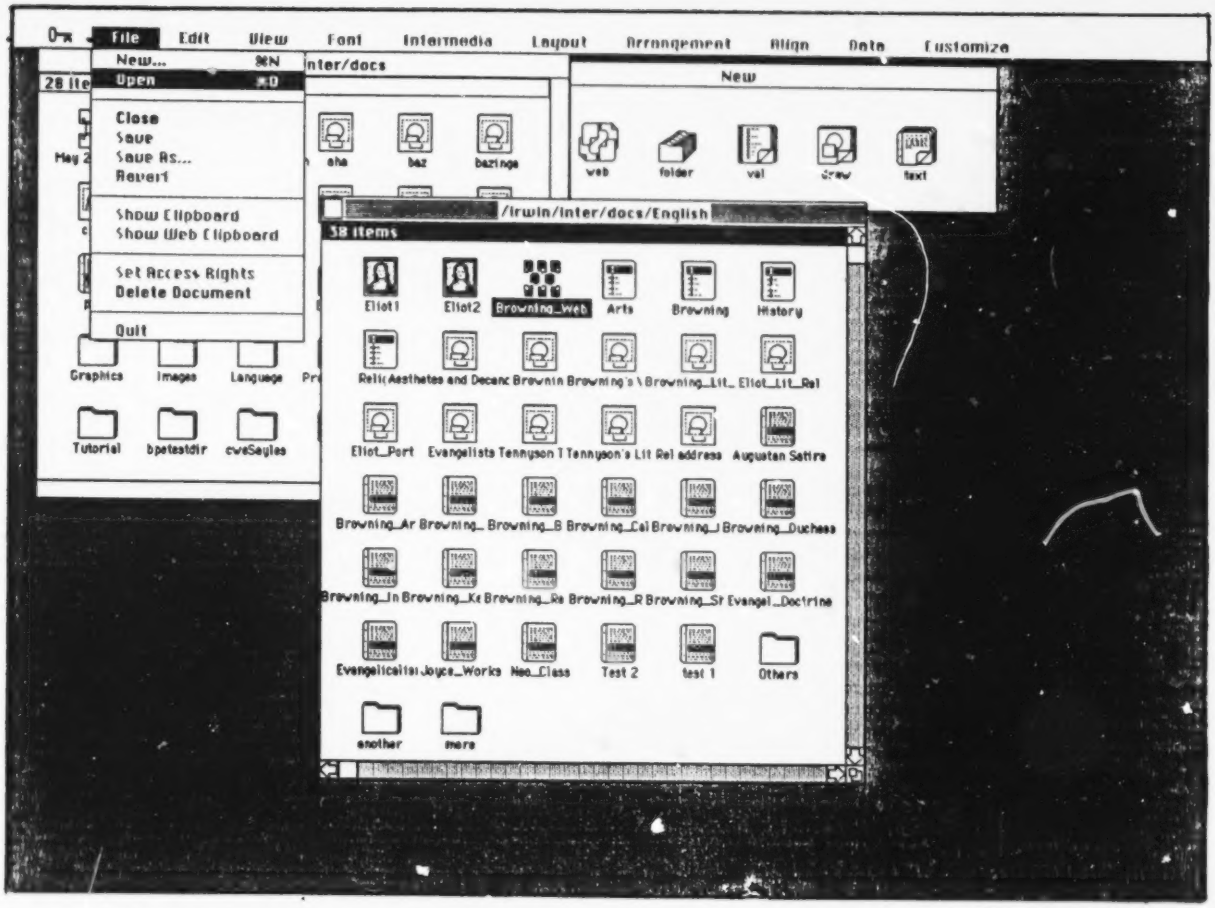
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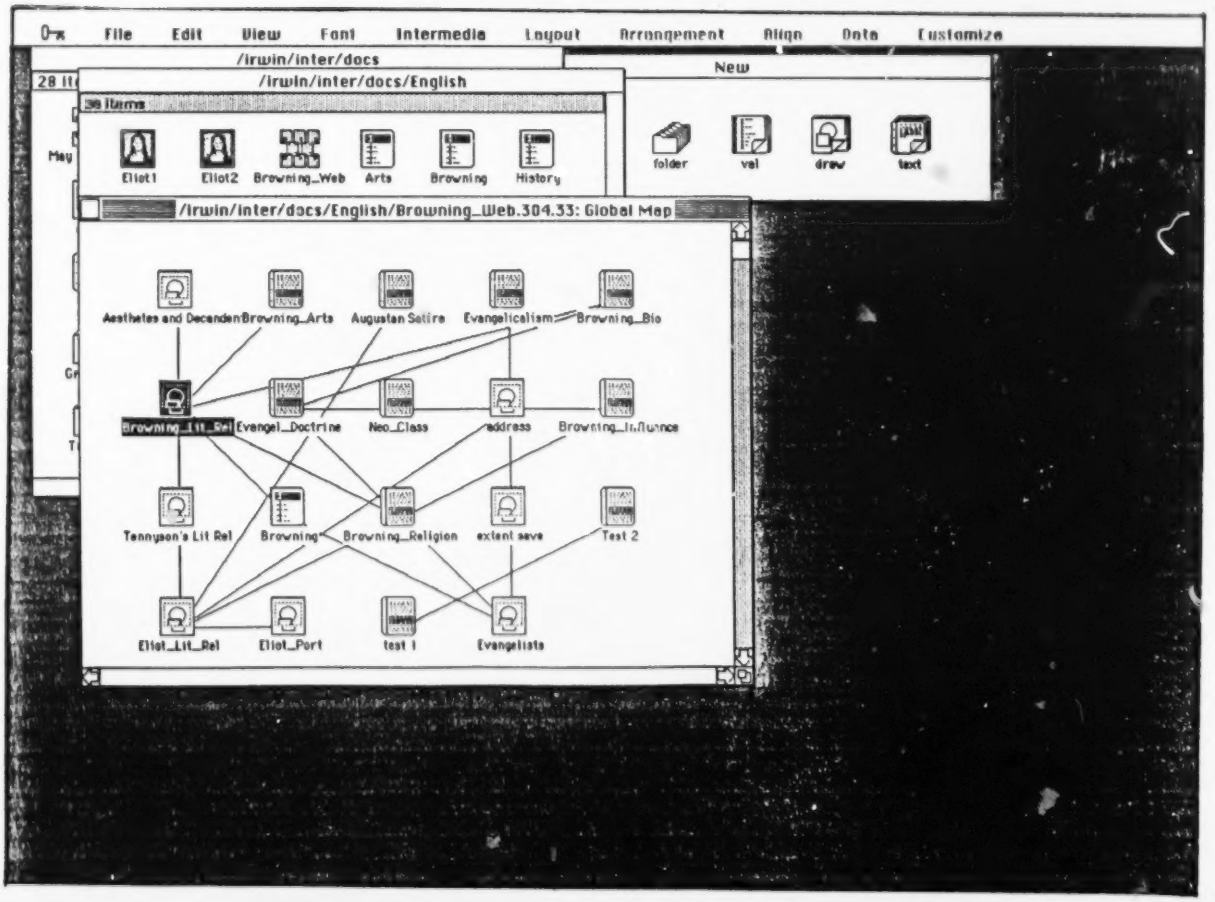
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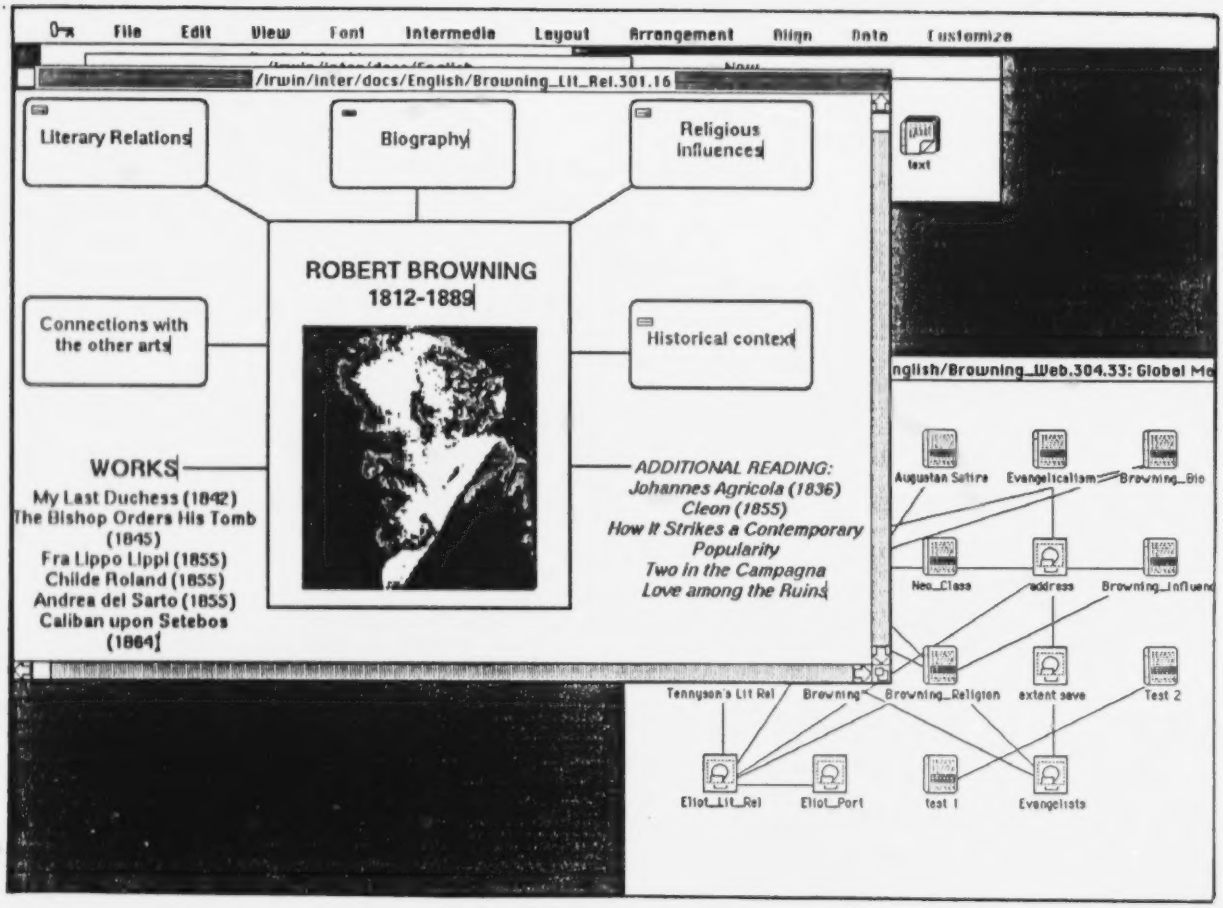
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1812-1889
Connections with the other arts
Historical context
WORKS
My Last Duchess (1842)
The Bishop Orders His Tomb (1845)
Fra Lippo Lippi (1855)
Childe Roland (1855)
Andrea del Sarto (1855)
Caliban upon Setebos (1864)
ADDITIONAL READING:
Johannes Agricola (1836)
Cleon (1855)
How It Strikes a Contemporary
Popularity
Two in the Campagna
Love among the Ruins
text
Augustan Satire
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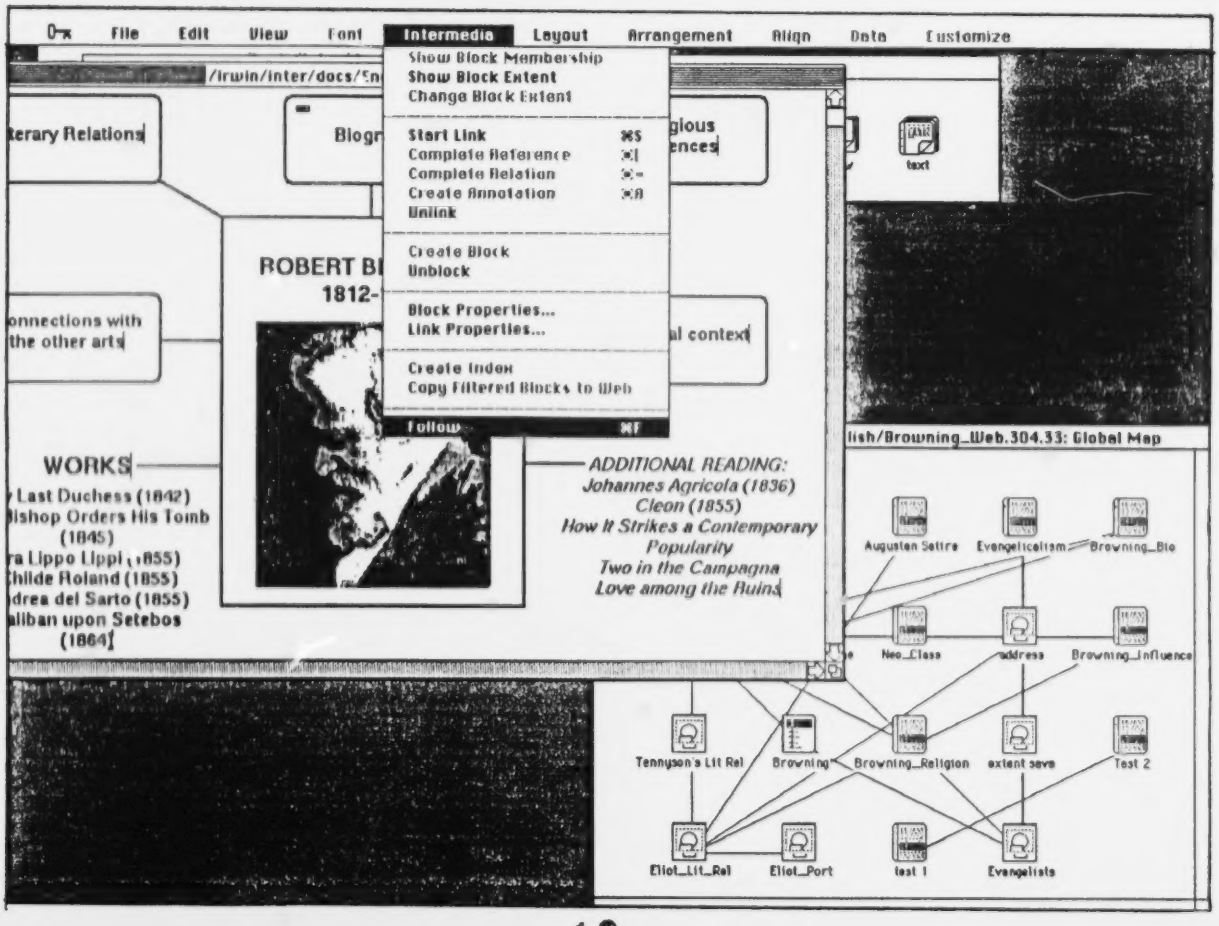
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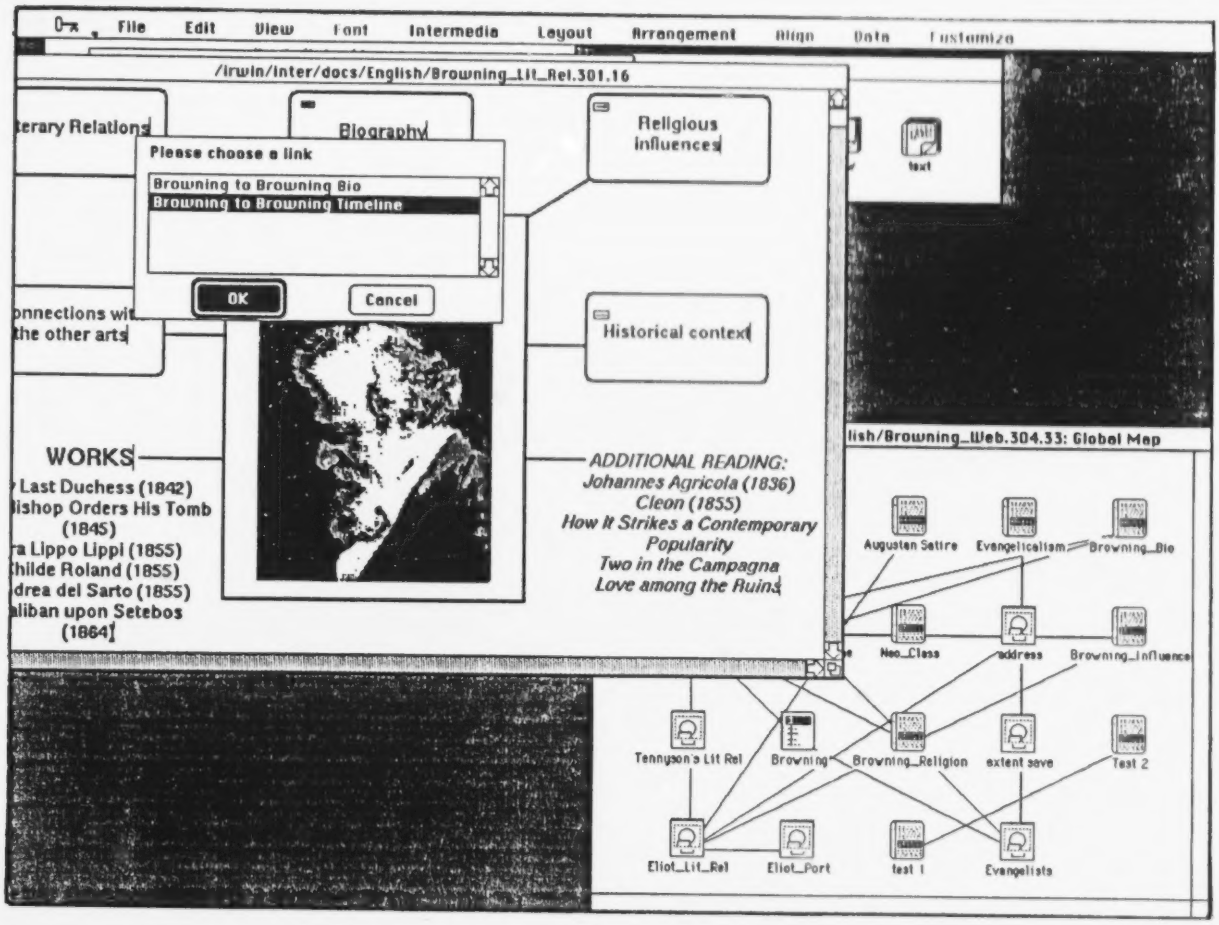
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Historical context
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Bishop Orders His Tomb (1845)
Fra Lippo Lippi (1855)
Childe Roland (1855)
Andrea del Sarto (1855)
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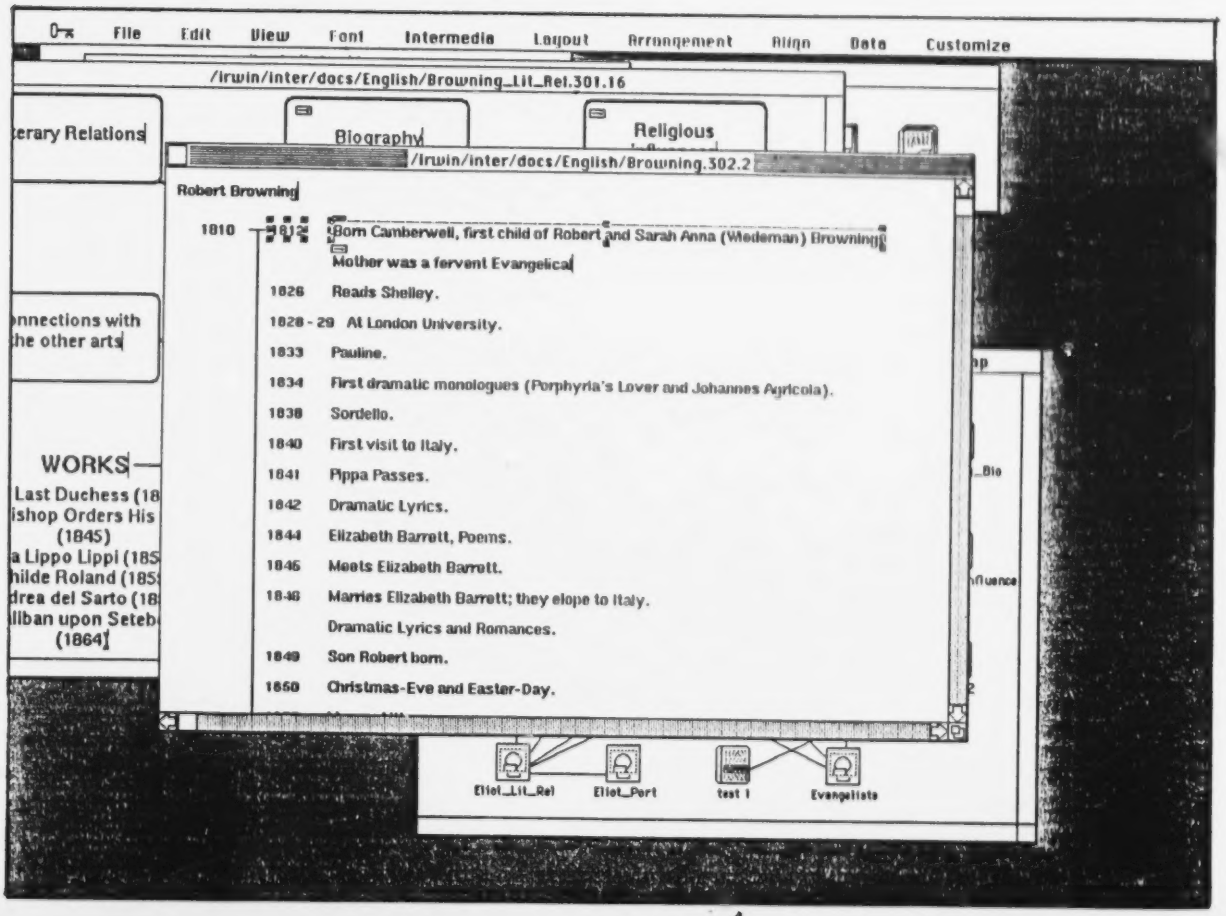
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Robert Browning
1810 Born Camberwell, first child of Robert and Sarah Anna (Wiedeman) Browning.
Mother was a fervent Evangelical
1826 Reads Shelley.
1828 - 29 At London University.
1833 Pauline.
1834 First dramatic monologues (Porphyria's Lover and Johannes Agricola).
1838 Sordello.
1840 First visit to Italy.
1841 Pippa Passes.
1842 Dramatic Lyrics.
1844 Elizabeth Barrett, Poems.
1845 Meets Elizabeth Barrett.
1846 Marries Elizabeth Barrett; they elope to Italy.
Dramatic Lyrics and Romances.
1849 Son Robert born.
1850 Christmas-Eve and Easter-Day.
WORKS
Last Duchess (18
Bishop Orders His
(1845)
Fra Lippo Lippi (185
Childe Roland (185
Andrea del Sarto (18
Caliban upon Setebo
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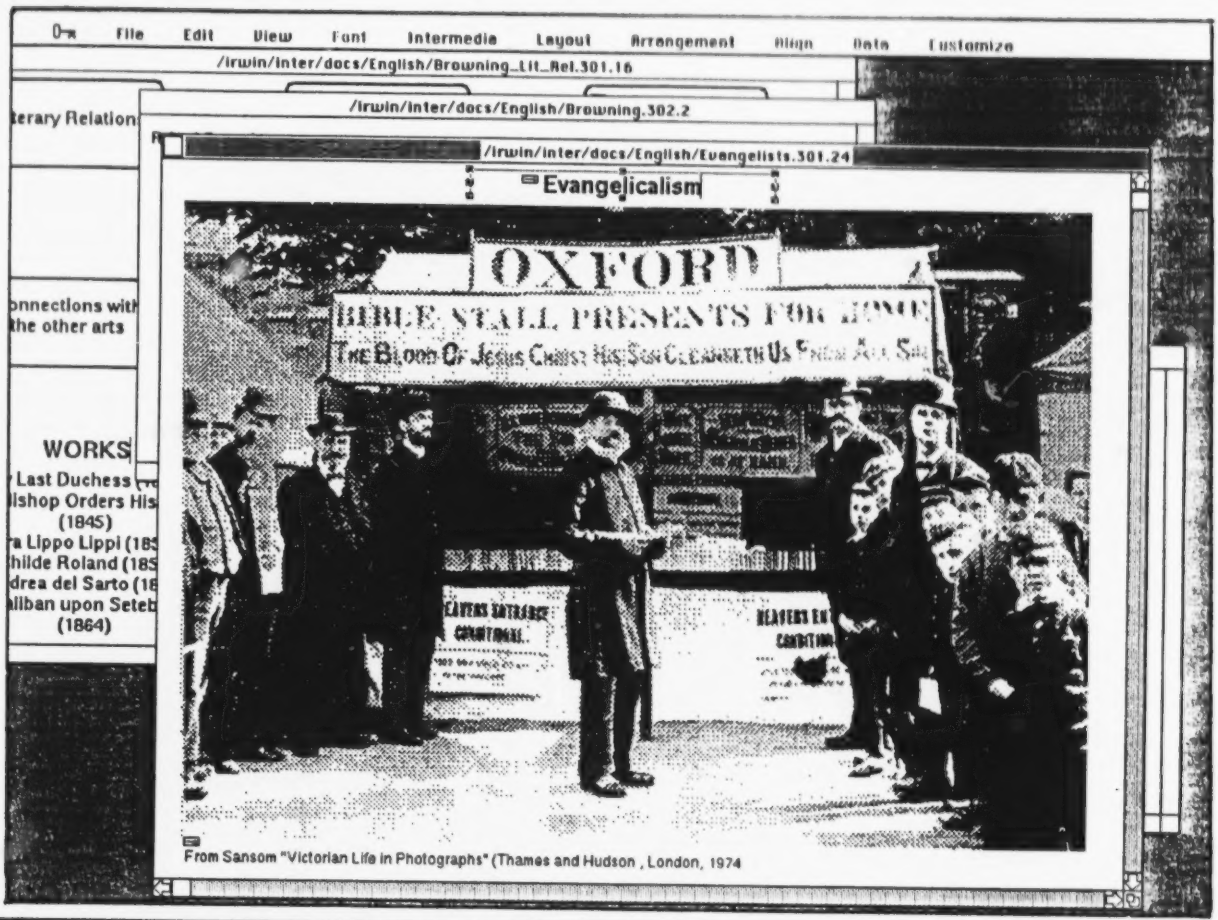
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THE BLOOD OF JESUS CHRIST HIS SON CLEANSETH US
WORKS
Last Duchess
Bishop Orders His
(1845)
Fra Lippo Lippi (185
Childe Roland (185
Andrea del Sarto (18
Caliban upon Setebo
(1864)
From Sansom "Victorian Life in Photographs" (Thames and Hudson , London, 1974

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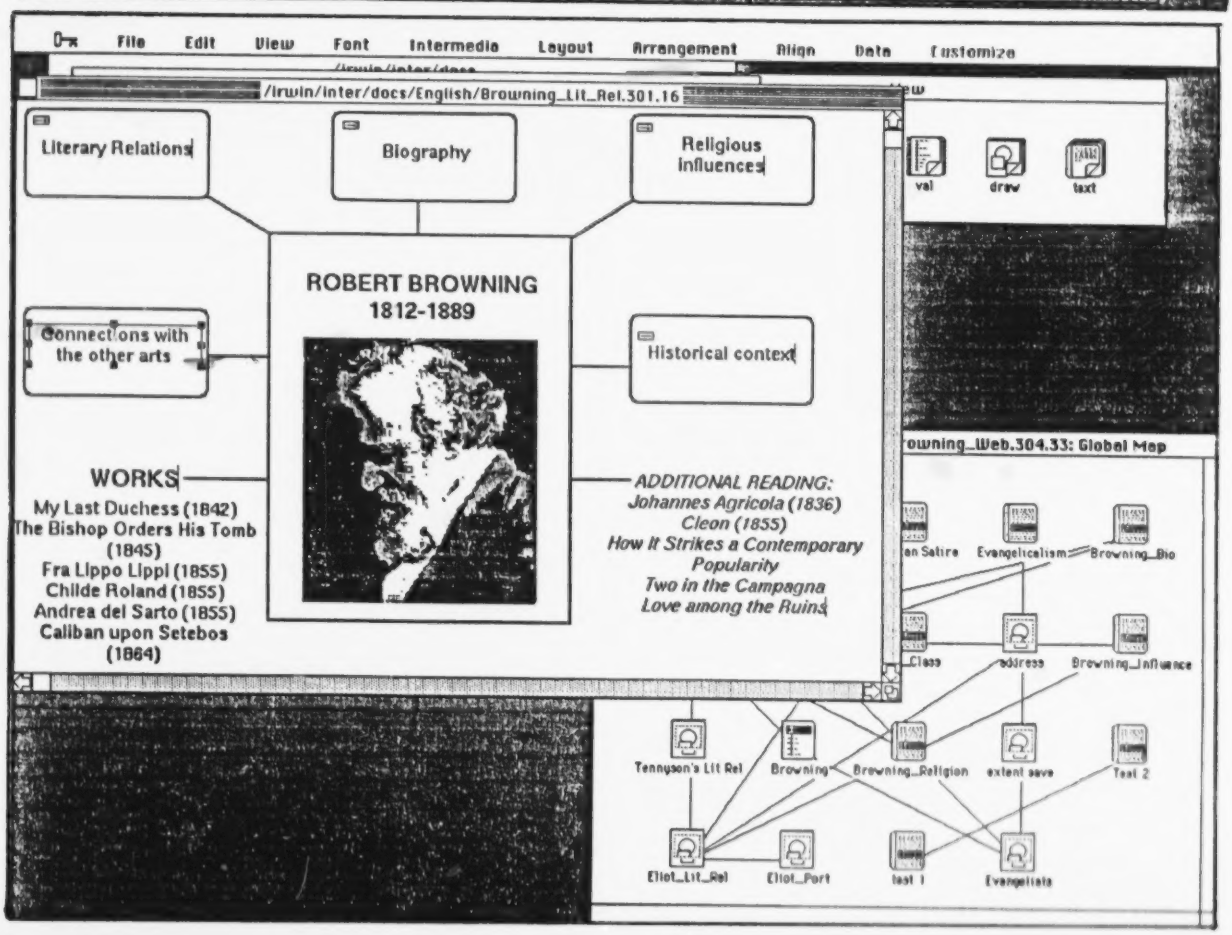
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1812-1889
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Historical context
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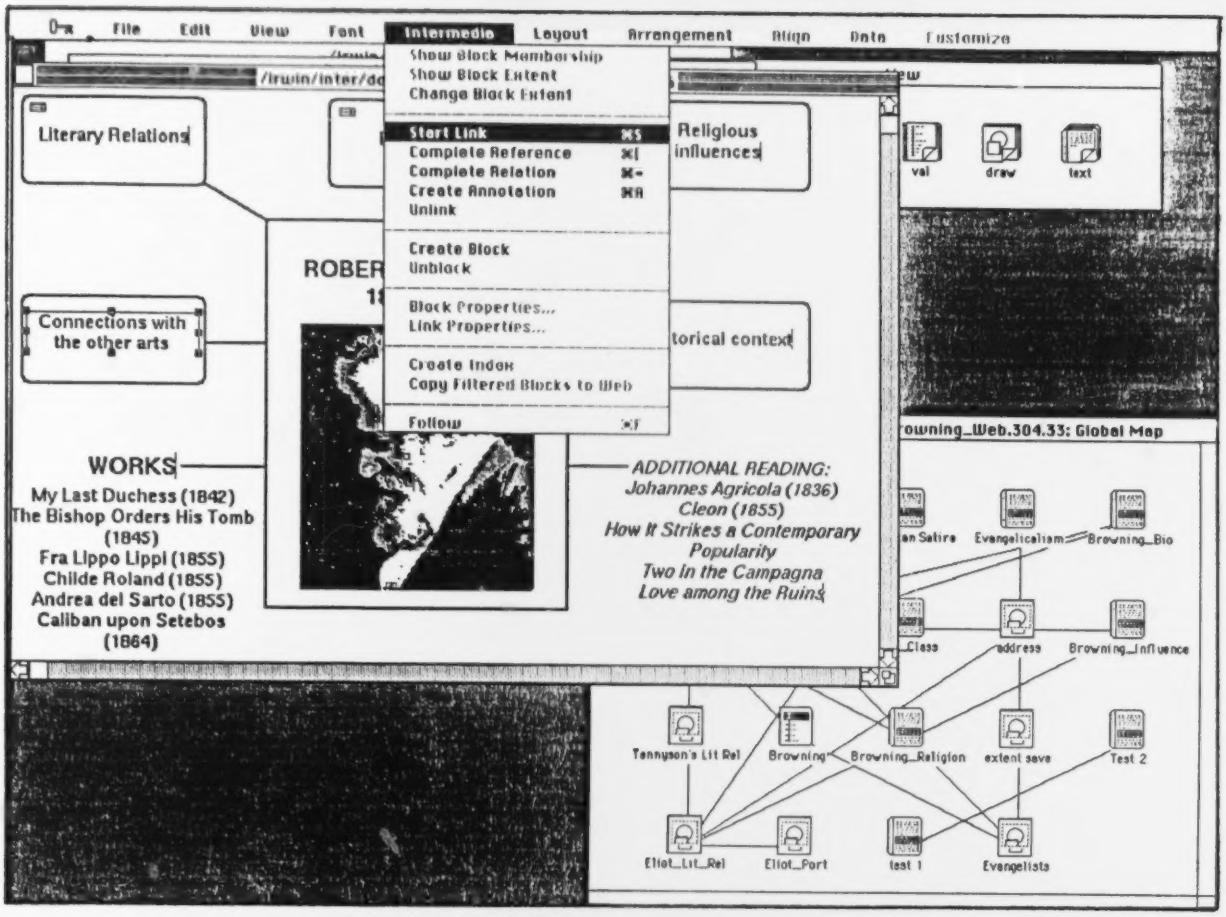
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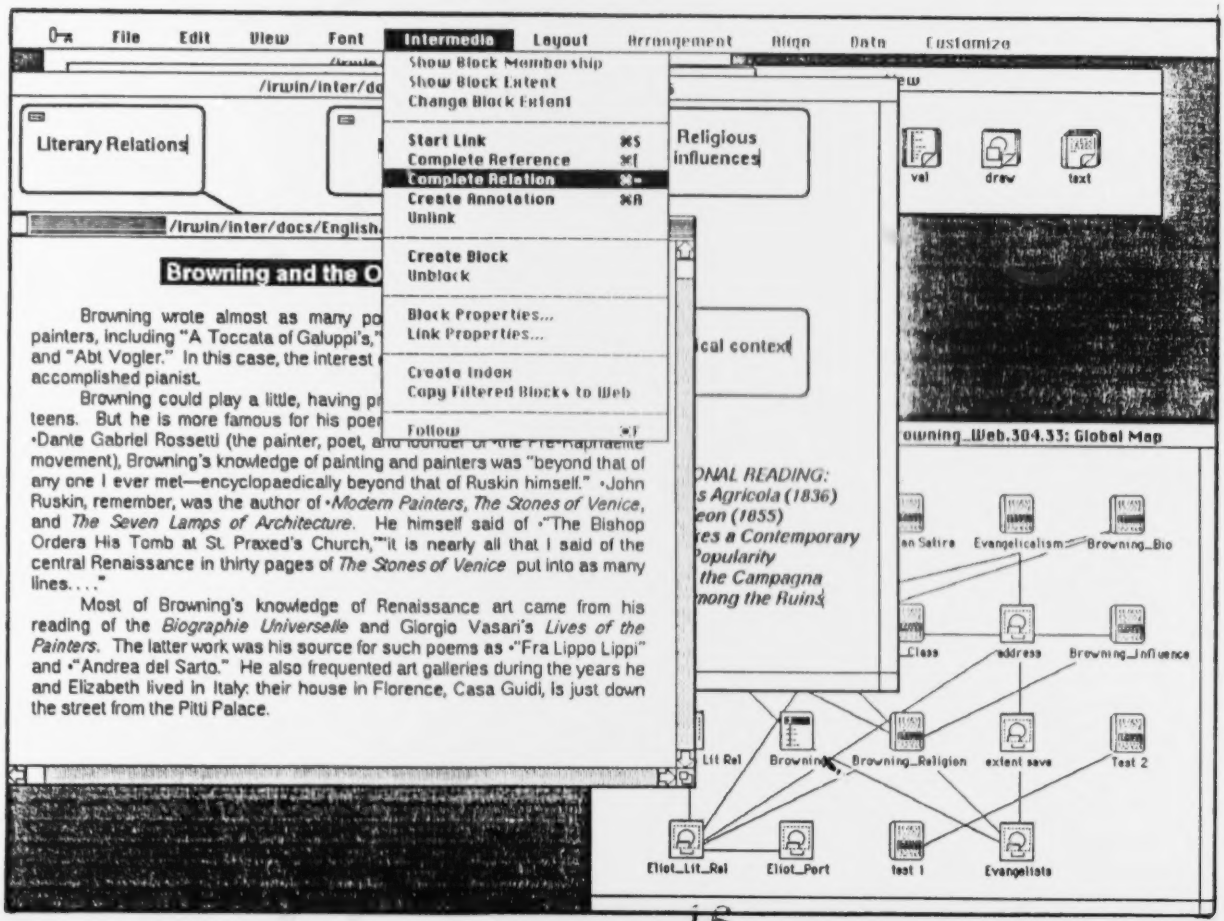
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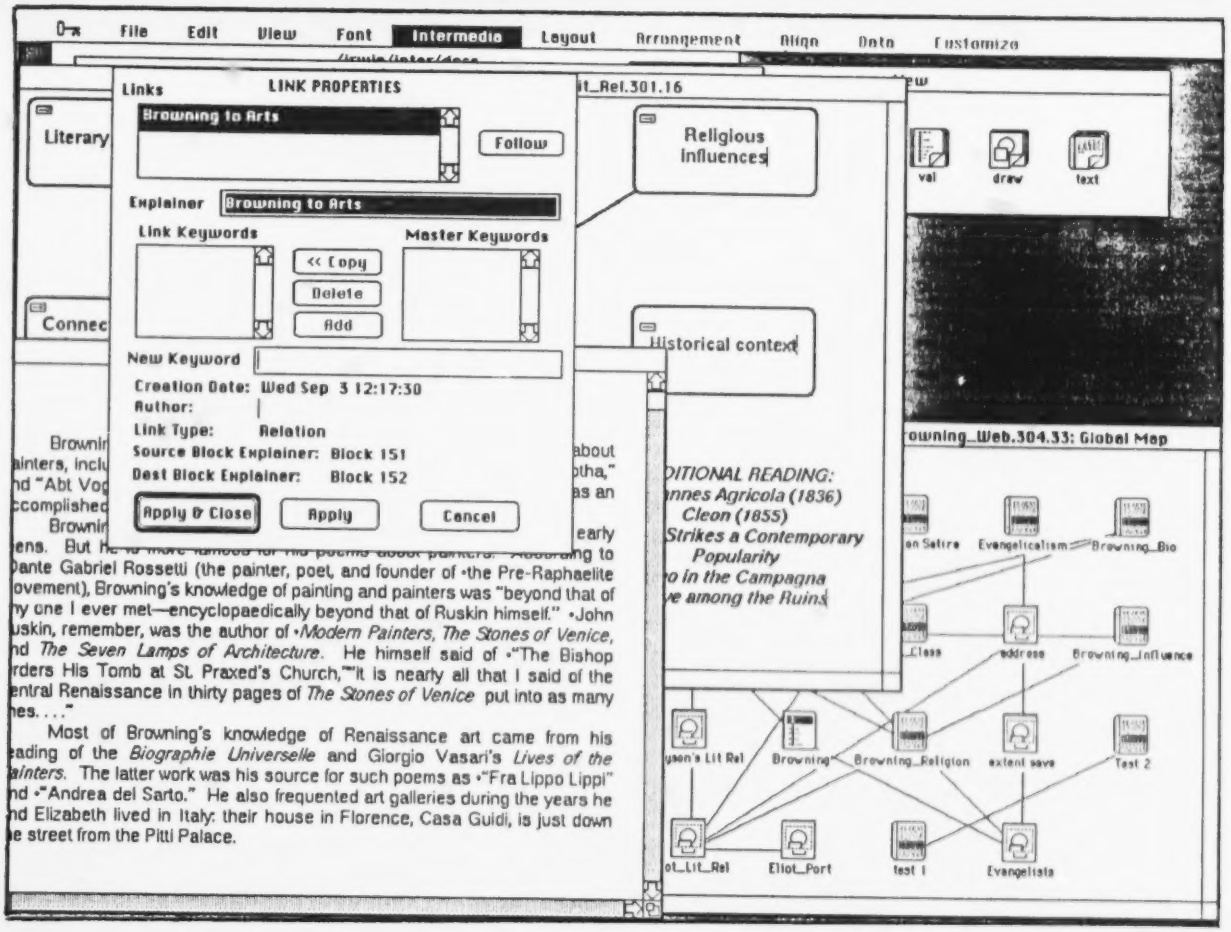
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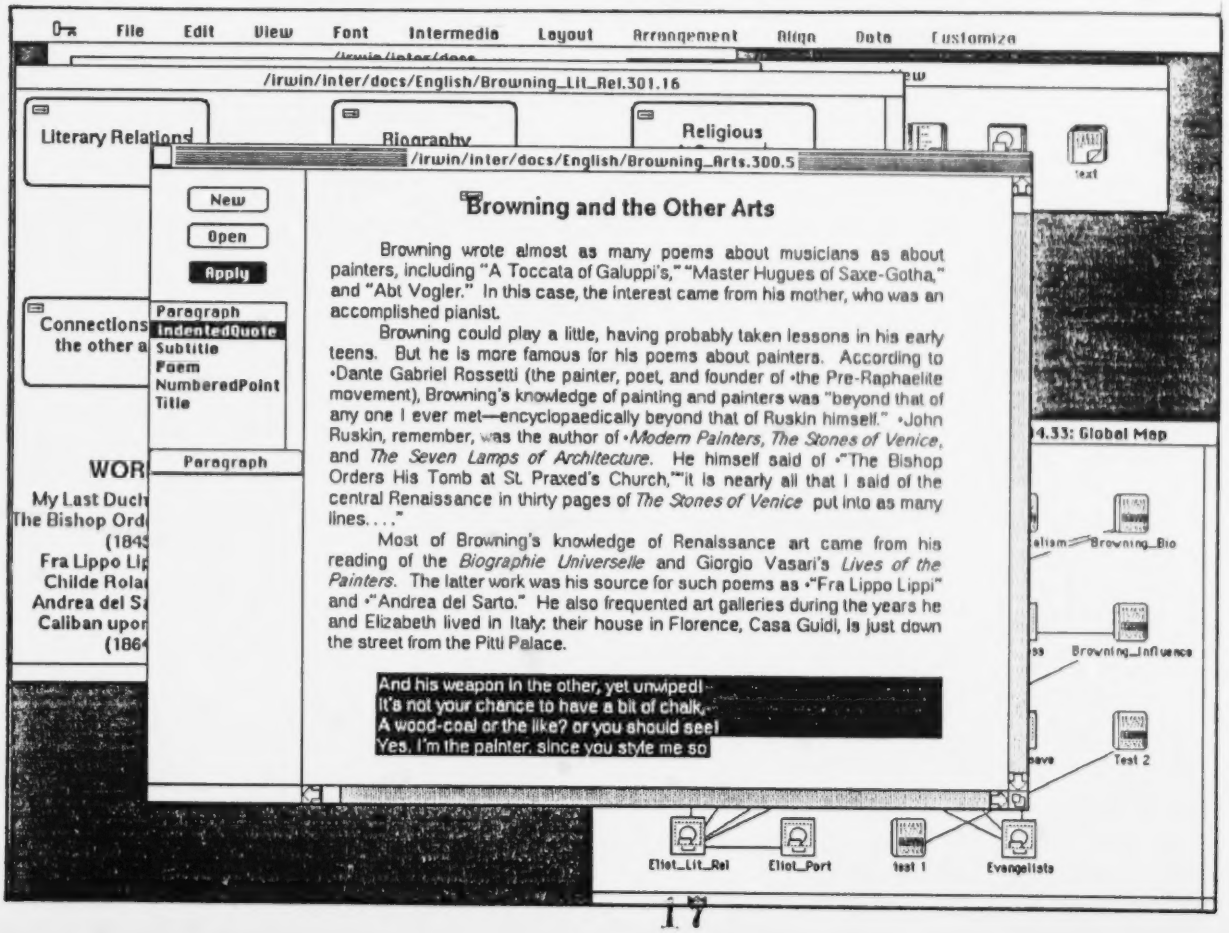
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Browning and the Other Arts
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And his weapon in the other, yet unwiped!
It's not your chance to have a bit of chalk,
A wood-coal or the like? or you should see!
Yes, I'm the painter, since you style me so
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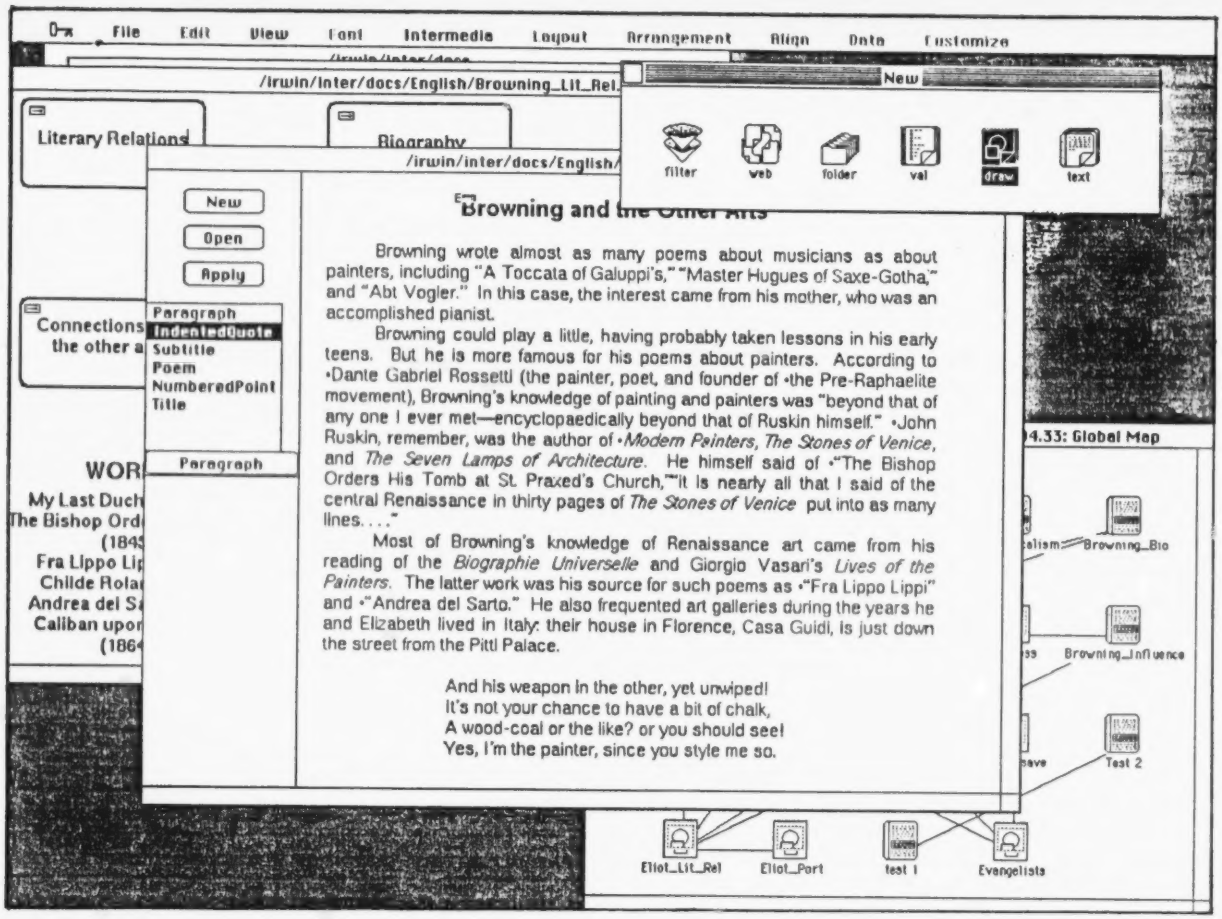
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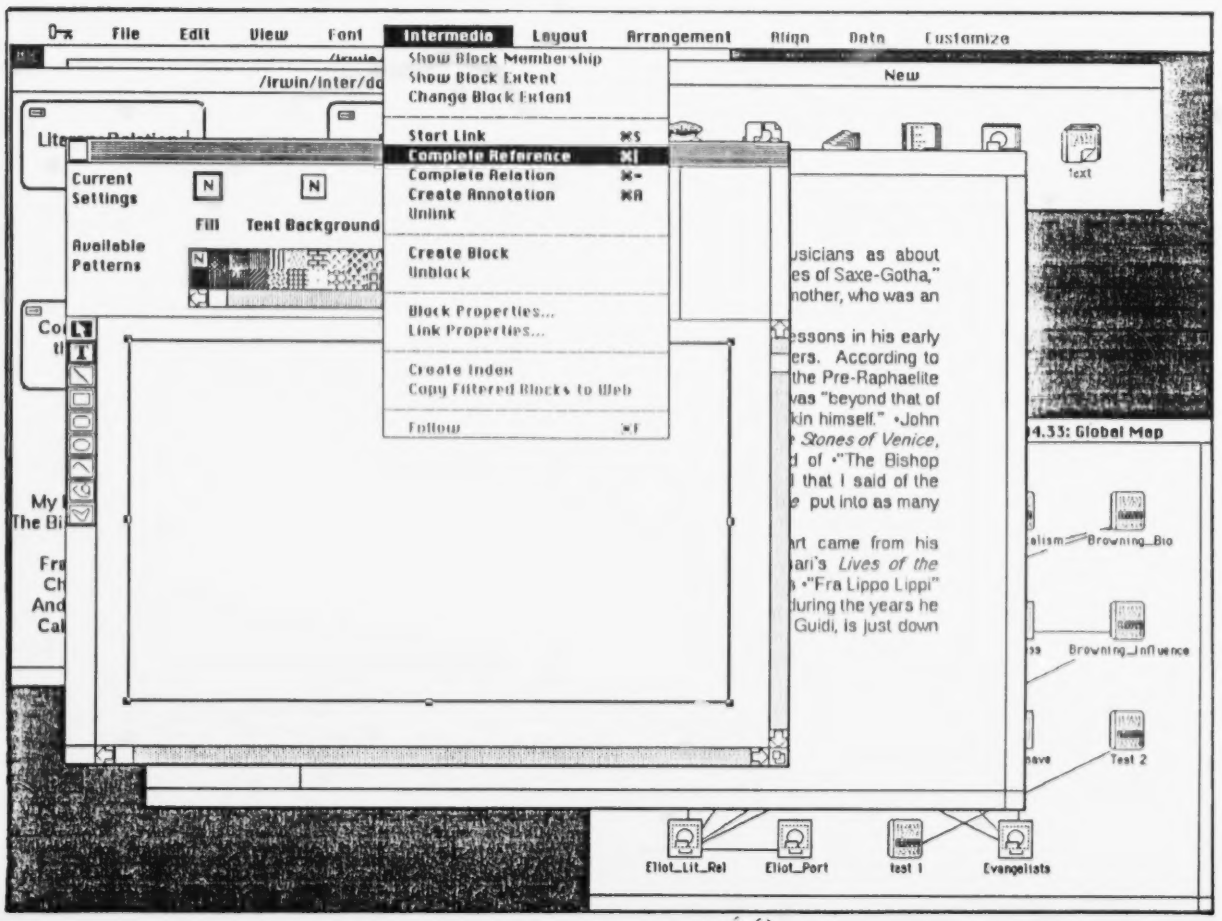
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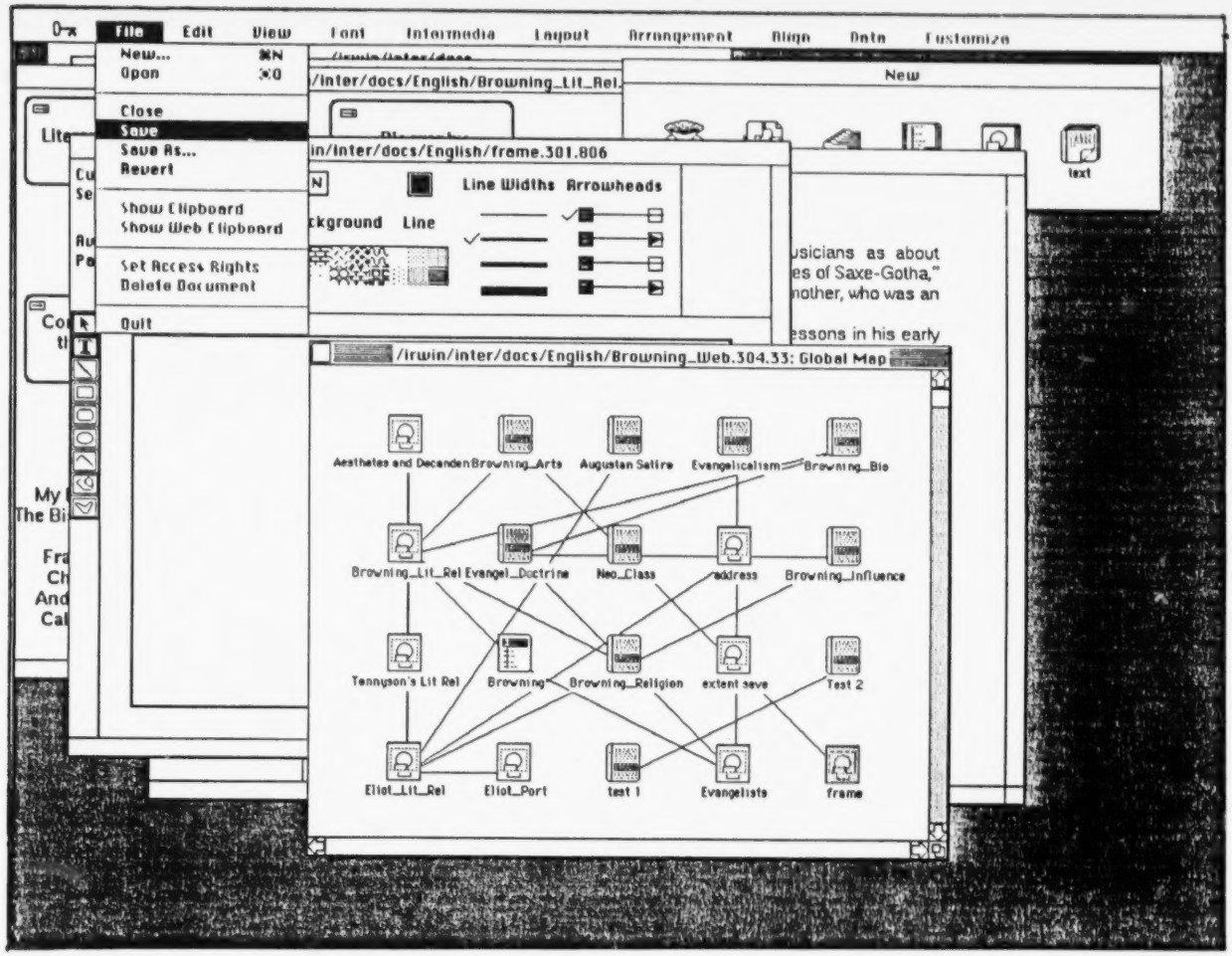
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